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CERTAIN CHARACTERISTICS OF STUDENT TEACHERS WHO STAY IN TEACHING.

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PERSISTENCE IN TEACHING, FOLLOWING COLLEGE GRADUATION IN THE FIELD OF EDUCATION, WAS STUDIED TO DEFINE AND DETERMINE THE SPECIFIC CHARACTERISTICS OF STUDENT TEACHERS WHICH CAN BE USED TO PREDICT LONGEVITY IN THE TEACHING PROFESSION. THE PROJECT HAD A LONGITUDINAL APPROACH, USING OVER 450 FEMALE SUBJECTS WHO HAD GRADUATED 10 YEARS PREVIOUSLY FROM 4 NEW YORK CITY MUNICIPAL COLLEGES. ALL SUBJECTS HAD TAKEN PERSONALITY AND ATTITUDE TESTS WHILE STILL IN SCHOOL, AND HAD RESPONDED TO FOUR QUESTIONNAIRES AFTER GRADUATION DURING SUBSEQUENT YEARS AS FOLLOWUP PROJECTS. PARTICIPANTS WERE FIRST ASSIGNED TO GROUPS IN ACCORDANCE WITH THEIR CAREERS AS TEACHERS (WITH RESPECT TO TIME AND DURATION) AND WITH THEIR FUTURE PLANS. THE GROUPS WERE THEN SUBJECTED TO MULTIPLE DISCRIMINATE FUNCTION ANALYSIS ON A NUMBER OF PSYCHOMETRIC MEASURES, TAKEN IN SCHOOL, IN SUCH A WAY AS TO DETECT GROUP DIFFERENCES. HOWEVER, NO SIGNIFICANT DIFFERENCES WERE NOTED WHEN THE MEASURES WERE CONSIDERED SINGULARLY WITHIN THE GROUP CLUSTERS NOR IN ANY MULTIPLE COMBINATIONS THEREIN. IT WAS THUS CONCEDED THAT NO PREDICTIVE MEASURES FOR TEACHING PERSISTENCE COULD BE FOUND, AND SUGGESTED THAT ADDITIONAL MEASURES AND NEW INSTRUMENTS WERE NEEDED TO FORM POSITIVE CONCLUSIONS. (JH)

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CERTAIN CHARACTERISTICS OF STUDENT TEACHERS WHO STAY IN TEACHING

Cooperative Research Project No. S-332

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for and on behalf of

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Table of Contents

	Page
List of Tables	iii
Acknowledgments	iv
Foreword	v
Chapter I - The Problem	1
Objectives	5
Chapter II - Related Research	7
The Longitudinal Study	8
Chapter III - Procedures	11
Groups	15
Data and Instrumentation	16
Statistical Analysis	23
Chapter IV - Results	25
Chapter V - Discussion and Conclusion	31
References	33

List of Tables

Table		Page
1	Comparisons of the 1956-57, 1959 and 1964 Respondents by Sex and College Attended	12
2	Comparison of the "Longitudinal" Respondents with the Respondents to the 1957 Questionnaire on the Basis of Level of Undergraduate Training and "Persistence" Category as of 1957.	14
3	Frequency of Each of the Seven Persistence Categories .	16
4	Group Means for Seven Categories of Teacher Persistence on 15 Measures.	26
5	Standard Deviations for Seven Categories of Teaching Persistence on 15 Measures.	27
6	Analysis of Variance for Seven Categories on 15 Measures.	28
7	Discriminant Analysis: Roots and Vectors of $W^{-1}A$ . . .	29

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Maurice A. Lohman

FOREWORD

The present report is one of a series of reports on an organized series of studies of the 1954 graduates of the teacher education programs in the colleges of The City University of New York. The original plan was drawn up by Harold Mitzel, William Rabinowitz and Donald M. Medley. The 1954 data which are analyzed in this report include the results of several original instruments and modifications of existing instruments which were devised for the longitudinal study. In a sense, then, the planning for this study was initiated twelve years ago.

The proposal for the current study was drafted by Dr. Donald M. Medley. The project has been capably directed and carried to a successful conclusion by Dr. Maurice A. Lohman. Thanks are due to former Dean Joseph G. Cohen and to Dean Harry N. Rivlin and Associate Dean W. Virgil Nestrick for their continued and unfaltering support of the entire longitudinal study, most of which was carried out with local resources and support.

With the completion of this twelve-year study of a single class of teacher graduates, a cycle comes to a close. It is the intention of the Division of Teacher Education, which coordinates what is probably the largest university teacher education program in the United States, to continue to plan and conduct research on teacher education and teacher effectiveness.

Albert J. Harris, Director
Office of Research and Evaluation

C H A P T E R I

THE PROBLEM

The inadequate supply of fully-qualified teachers in the period following the end of the Second World War, is one of the problems which has aroused great continuing concern in American education. Annual statistics on teacher supply and demand, carefully collected by the National Education Association since 1950, reiterate the gloomy fact that there are not enough fully qualified teachers to staff the classrooms of this country, and that there will not be enough in the forseeable future.

The well-publicized need for adequately-prepared teachers has inevitably led to a wide variety of programs designed to increase teacher supply. Many of these programs represent efforts to recruit able college students for teaching careers. The success of these recruitment efforts is apparent in the data collected by the Research Division of the National Education Association. Between 1948 and the present, the percentage of all college graduates who prepared for teaching increased fairly steadily. Locally, a similar trend toward increased enrollments in teacher education programs is revealed by a semi-annual census of the student body of The City University of New York.

Evidence that more and more college students are preparing for teaching is encouraging. The number of graduates eligible for standard teaching certificates in 1965 increased 9.9 percent over 1964. However, reflection will raise questions about the ultimate significance of this increase in prospective

teachers. It is obvious that we must educate students who will enter teaching and who, once employed, will remain to make teaching a long-term career. How many of the nearly 191,000 newly-trained teachers who were graduated from American colleges in 1965 will be able to meet this test?

If the trends of the past continue into the future, the overwhelming majority of these new teachers will not be found in the classroom five years from now. Nationwide surveys among teacher education graduates clearly indicate that although between 70 and 80 percent of these students enter teaching within a few months after completing their undergraduate studies, many of them leave within their first five years in any one school system (3).

Part of the difficulty lies in the nature of the teaching profession. Teaching as a career field attracts more women than men. In 1965, of those who were graduated from American colleges with sufficient preparation to teach, only 32 percent were men. In the conflict between career and family responsibilities it is usually the career which is sacrificed, at least temporarily. Large numbers of women teachers leave teaching shortly after entering service.

Men graduates, who must also reach decisions about entering and leaving teaching, are probably less often subject to pressures from conflicting family responsibilities. But men too leave teaching. Many fields with the same general entrance requirements offer greater prestige and higher salaries

as well as more rapid advancement than teaching, and many men are probably lured away by these attractions.

For many years it has been recognized that the annual rate of teacher turnover is very high, although the actual rate is subject to some disagreement. Recent estimates range from a high of 10.9 percent reported by the Department of Health, Education and Welfare in 1957-58 (10) to a low of 8.5 percent reported by the National Education Association in 1964-65 (20). Reports from other sources, however, would lead one to disregard the appearance of a diminishing trend and to attribute the differences to sampling procedures. Even the 8.5 percent figure represented a loss to the teaching profession of 175,000 classroom teachers in 1964-65.

In the 1957 report on teacher supply and demand (19), the Research Division of the National Education Association, while lamenting the dearth of adequate statistics on teacher persistence, concluded quite bluntly:

> "The high annual mortality in teaching has not been charged with its enormous share in creating and extending the teacher shortage. Thousands of new teachers are required each year to replace those who, though well prepared, have successful records and are capable of many more years of effective service, nevertheless leave the profession. Too many times the schools of the nation profit only briefly from a substantial investment in counseling, selecting, training, and inducting into service a person competent to carry out the highly complex task of teaching. Probably the financial loss in this existing routine is not duplicated elsewhere in the professional occupations. But it is the loss of competent personnel that is most to be deplored. Only a careful, patient study of the reasons teachers leave classroom service can point the way to a diminution of this annual loss."

It was against this background of concern for alleviating the teacher shortage that the Office of Research and Evaluation has undertaken a longitudinal study of the teaching persistence of a group of approximately 1600 graduates of the New York City municipal colleges.

The study was initiated in 1954 in the conviction that objective data on teaching persistence is a necessary base on which to plan programs for strengthening teaching as a career field and ultimately for alleviating the teacher shortage.

Teaching persistence may be defined objectively as the length of time following graduation in which a teacher education student is employed as a teacher. In practice the measurement of teaching persistence may present some ambiguities. Since a teacher's decisions to enter, remain in, leave, and return to the teaching profession are not irrevocable, the teacher's persistence record depends, in part at least, on the time at which follow-up data are obtained. The problems suggested here argue strongly for the collection of longitudinal career data.

Municipal college seniors in student teaching courses were given a battery of standardized and experimental tests. In the eleven years since their graduation, they have been contacted four times to obtain information on their persistence status as well as on their marital, family and other situational statuses. Descriptive reports on this data have been issued in 1954, 1958, 1960 and 1965. At the time of the fourth questionnaire a

supplementary investigation was initiated to obtain data that was difficult to secure through a brief questionnaire. A sample of 50 career-oriented, persistent teachers was interviewed, and the interviewing of another sample of 100 non-persistent teachers is in process.

The purpose of the current study was to report on and to relate for the first time the psychometric information secured in 1954 from the student teachers to their persistence as teachers ten years later.

Objectives

The principle objective of this study was to extend and amplify work which has been done in studying the 1953-54 class of former student teachers.

Reports on this work during the past ten years, derived from questions dealing with career history data, have been descriptive. They emphasize that non-persistence is related mainly to the fact that the teaching staff is composed in overwhelming proportion of women and that the woman's career pattern generally involves one or more interruptions in service for maternity leave and child care. This leaves education with a fact of life that it will have to live with and for which it will, hopefully, be able to make adjustments. Suggestions as to possible adjustments have already been made (7).

Though the present study did not focus on hypotheses to be tested, it was designed to provide answers to some important questions:

1. To what extent is teacher persistence ten years after graduation predictable on the basis of test data obtained when the teachers were student teachers?
2. If teacher persistence is, at least in part, predictable, what measured variables are the most successful prognostic indicators? More specifically, to what extent is it possible to go beyond the situational factors described in former reports (sex, age, marital status, family status) in an attempt to identify some personality variables that might account for different behavior in spite of similar situations?

Chapter II

RELATED RESEARCH

During the academic year 1953-54, the Office of Research and Evaluation of the Division of Teacher Education began a longitudinal study of approximately 1600 students who were completing teacher education programs at the four-year municipal colleges of The City University of New York. The students were all enrolled in student teaching, which is the culmination of the teacher-education program at the municipal colleges and is therefore taken during the student's senior year.

Since the subjects of the study were graduates of the New York City municipal colleges, it may be instructive to describe these institutions briefly. The City University of New York is comprised of eleven tax-supported collegiate institutions, including four senior colleges which offer teacher-education programs: The City College, Hunter College, Brooklyn College, and Queens College. Operating under the jurisdiction of the Board of Higher Education, these colleges are open day and evening throughout the year. About 140,000 New Yorkers are in attendance at The City University, with nearly 50,000 students in four-year baccalaureate programs.

One of the largest subgroups of this vast student body is composed of those students -- over 38,000 in number -- who are enrolled in teacher-education programs. During 1965, over 4,000 students, about three-fourths of whom were undergraduates and one-fourth of whom were graduate students, were graduated after completion of a teacher-education program at one of the municipal colleges (6).

Each year since 1950, the municipal colleges have prepared over 1.5 per cent of the national supply of new teachers. The largest single employer of these graduates is the Board of Education of the City of New York. More than 60 percent of the approximately 40,000 teachers in the New York City public schools are graduates of the municipal colleges. Although most of The City University graduates teach in the local area, many are employed in suburban communities and some are teaching in schools far from New York.

The Longitudinal Study

As an initial step in the conduct of the study, the subjects, who were then student teachers, took a group of personality and attitude tests. The tests were all paper-and-pencil inventories which were assembled as a "packet" for group administration (18).

During the academic year 1954-55, a follow-up of a small group of the student teachers who had been tested the year before was undertaken. Those students who were then teaching in Grades 3 to 6 in New York City public elementary schools in which at least one other member of the group was also teaching were encouraged to participate as subjects in an observational study. Of approximately 75 teachers who met these criteria, it was possible to conduct intensive observations in the classrooms of 49. In addition, several tests were administered to the pupils taught by these 49 teachers and to the teachers themselves. The data thus collected have been used to examine a variety of issues related to the measurement and prediction of teacher effectiveness and pupil-teacher rapport (12, 13, 15).

In 1955, the first of the mail questionnaire follow-up studies was begun. This first questionnaire was primarily designed to establish contact with the subjects and therefore no report was prepared. Subsequent follow-ups, each based on a questionnaire mailed to the graduates, were conducted in 1957, 1959, and 1964. The findings of these surveys have been reported as part of the series of research publications issued by the Office of Research and Evaluation (14, 26, 8).

The results of all four surveys were similar. The overwhelming majority of student teachers were females who were prepared for teaching at the elementary level, as compared to the small number of males who tended to prepare for secondary school teaching. Males were more likely to be persistent teachers, provided they entered the profession soon after graduation. It was quite clear that virtually all those leaving teaching were women, and that they left because of marital and family obligations. The difference between the group that returned to teaching and the group who at the time of the survey had not returned seemed largely due to the presence of children of pre-school age. Another factor contributing to persistence was the annual income of the spouse.

The trends were directly related to sex differences. For example, a consistent finding was that older respondents tended to be more persistent; with increasing age there appeared to be a decrease in the marriage probability for females.

Although 56 percent of the graduates who were teaching in New York City elementary schools were assigned to "difficult" schools, the difficulty of a school had no appreciable relationship to the graduates' persistence in teaching.

Forty-five percent of those employed as teachers indicated an intention to teach indefinitely or until retirement. Over 20 percent of the women planned to leave teaching in the near future.

About 85 percent of those with teaching experience -- former teachers as well as those currently teaching -- evaluated their teaching experience as either "fairly satisfying" or "very satisfying."

It is widely recognized that the data that can be obtained through a mail questionnaire is inevitably limited in many ways. In this respect, the questionnaire surveys of the 1953-54 graduates were typical. To obtain a maximum proportion of returns, the number of questions was deliberately kept small. Moreover, the questions were structured to permit relatively simple answers which in some cases were precoded. Thus, depth and extensiveness of information were sacrificed to obtain the broadest possible sample of respondents.

C H A P T E R III

PROCEDURES

The subjects of this study represent a selected sample of the total population of approximately 1,800 student-teachers of the class of 1953-54; initial test protocols and biographical data were available for 1,628 of them. Both the first (1955) and the second follow-up survey (1956-57) questionnaires were sent to these 1,628 subjects. Ninety-one percent or 1,476 subjects responded to the first survey. There were 1,323 responses, an 81 percent return, to the second follow-up study in 1956-57 (26).

The next follow-up was initiated in 1959. Since it was already known that mailing addresses were obsolete for 106 persons, the number of questionnaires mailed in 1959 was 1,522. The number of responses was 1,144 -- 70 percent of the original number of 1,628 and 75 percent of the 1,522.

In January 1964 a slightly revised questionnaire was mailed to the 1,522 subjects for whom addresses had been available in 1959. To encourage replies from non-respondents, two additional letters of reminder and copies of the questionnaire were mailed. Of the 1,522 questionnaires mailed, only 1,122 were actually delivered. Every effort was made to secure addresses for the other four hundred subjects, but (partly because of the Post Office policy of not forwarding mail for more than three years after change of residence) they were never located. Of the 1,122 subjects who received the 1964 follow-up questionnaire, 75 percent or 840 subjects replied.

Summarizing, the returns received in each of the surveys were as follows:

first follow-up (1955).....1,476 replies (91% of 1,628)

second follow-up (1956-57)....1,323 replies (81% of 1,628)

third follow-up (1959).....1,144 replies (70% of 1,628; 75% of 1,522 delivered)

fourth follow-up (1964).....840 replies (52% of 1,628; 75% of 1,122 delivered)

Table 1 summarizes the number and percentage of male and female respondents to the 1956-57, 1959 and 1964 questionnaires, according to the municipal college attended. Inspection of the data indicated no differences in the percentage of respondents in 1957, 1959 and 1964 with regard to sex or college attended.

Table 1

Comparisons of the 1956-57, 1959 and 1964 Respondents by Sex and College Attended.

Municipal College	1956-7 Male N	%	1959 Male N	%	1964 Male N	%	1956-7 Female N	%	1959 Female N	%	1964 Female N	%
City	57	(4%)	48	(5%)	30	(3%)	115	(9%)	116	(10%)	78	(9%)
Hunter	27	(2%)	18	(2%)	15	(2%)	589	(45%)	505	(44%)	387	(46%)
Brooklyn	70	(5%)	52	(4%)	38	(5%)	269	(20%)	233	(20%)	161	(19%)
Queens	17	(1%)	12	(1%)	9	(1%)	179	(14%)	160	(14%)	122	(15%)
Total	171	(12%)	130	(12%)	92	(11%)	1152	(88%)	1014	(88%)	748	(89%)

There seems to be no reason to doubt that the respondents to the 1964 questionnaire adequately represented the population in which the sample originated.

Of these 840 subjects, 659 had responded to all three of the earlier surveys, thus forming a "longitudinal sub-sample" for whom career data were available from the time of graduation to the present. As far as can be determined, the 659 teachers in this longitudinal sub-sample do not differ from the other 969 teachers for whom we have test and biographical data and who did not respond to one or more of the four questionnaires. Of these 969 teachers, 664 responded to the second questionnaire in 1957, which was the first time that survey data was reported. Table 2 compares this 1957 group with the longitudinal sub-sample with respect to level of undergraduate training and career persistence status as of January 31, 1957.[1] Inspection of the table reveals that the two groups of respondents do not differ in these respects. Although these data describe the representativeness of the respondents, the question, beyond the scope of this study, of whether the 1953-54 class of student teachers is <u>itself</u> representative of student teachers graduated from the municipal colleges in earlier and later years is unanswered.

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1 Persistence is the length of time following graduation a teacher-education student spends in teaching. Some leave teaching; some leave and subsequently return. Since most of these decisions are not irrevocable, persistence or non-persistence is largely a function of the time at which the information is obtained (22).

TABLE 2

Comparison of the "Longitudinal" Respondents with the Respondents to the 1957 Questionnaire on the Basis of Level of Undergraduate Training and "Persistence" Category as of 1957.*

Respondents	Persistence Categories as of 1957			
	Now Teaching	Never Taught	Taught, but Left	Total
Longitudinal sub-sample	465	55	139	659
Elementary Level	359	24	101	484
Secondary Level	106	31	38	175
Other respondents to 1957 questionnaire	461	41	157	659
Elementary Level	359	17	126	502
Secondary Level	102	24	31	157

* Note: There was a total of 1,323 responses to the 1957 questionnaire. Of these, 659 responded to each of the later surveys, forming the "longitudinal" group. Of the remaining 664 subjects, 5 could not be categorized leaving, coincidentally, an equal number of 659 subjects.

The longitudinal sub-sample consisted of 590 female and 69 male subjects. Since 62 of the 69 males were reported as persisting in teaching, it did not seem wise to include the males in the study. Thus, the 453 subjects included in the present analysis were drawn from the longitudinal sub-sample of 590 females.

Groups

The 590 female subjects were divided into seven groups as follows:

1. Females who began teaching soon after graduation and were still teaching ten years later (AT).
2. Females who began to teach soon after graduation, left after a period of time, and have since returned to the profession (TLR).
3. Females who began teaching soon after graduation, but are now in an educationally-related field such as college teaching or school administration (RF).
4. Females who, although they completed a teacher education program and were qualified to teach, have never taught (NT).
5. Females who began to teach soon after graduation, but left after a short time to take up family responsibilities, and who express no intention of returning to the profession (TL NR).
6. Females who began to teach soon after graduation, left the profession, and express an intention to return to it at some future time (TL IR).
7. Females who began to teach soon after graduation, left the profession and are undecided about the future (T L U).

Table 3 presents a frequency distribution of the seven groups, along with the frequencies used in the study.

Table 3

Frequency of Each of the Seven
Persistence Catagories

Group	Longitudinal Sub-Sample	Used in Study*
1 AT	106	96
2 TLR	79	59
3 RF	19	11
4 NT	28	20
5 TLNR	68	42
6 TLIR	222	170
7 TLU	68	55
Total	590	453

*Note: Since the statistics used in the study required that each subject have a score for each measure, 137 cases were dropped from the study due to some items of missing data.

Data and Instrumentation

From the data available on these subjects from their student records, the following 15 items were selected as showing promise for the present study.

Item 1. Inventory I. This instrument is a modification of the "F" Scale developed by the Berkeley group of social psychologists from their studies in prejudice (1). A high score on this scale designates a tendency toward implicit anti-democratic attitudes. The scale consists of 30 items. The respondent is asked to indicate the extent of his agreement with each item. The items are so phrased that agreement indicates an outlook characterized by little tolerance of ambiguity, unquestioned

acceptance of authority figures, and a perception of the world as hostile and threatening. Inventory I differs from the "F" Scale to the extent of a slight alteration in directions, elimination of two items, and an addition of two educationally-oriented items to the original pool reported in Adorno, et al. (See Appendix)

In many schools today emphasis is placed on a democratic educational process. This emphasis is based on the belief that a democratic classroom climate is essential to the development of democratic attitudes among pupils. If many schools are governed by this philosophy, it seems reasonable to assume that the degree to which the teacher agrees with the philosophy may be related to the success she has in adjusting to school life.

The original plan had been to deal only with the total score of the scale as one of the possible predictive measures of persistence. However, we believed that the individual subscores yielded by this scale should be considered as additional independent predictive variables, since they are meaningful in their own right as well as in the way they contribute to an overall authoritarian orientation.

The subscores, each ranging from 0 to 7, are thought to reflect central personality trends, which, in dynamic relation to each other, underly a single pattern of potential receptivity to antidemocratic propaganda or of authoritarian attitudes. These underlying personality trends are:

Item 2. Conventionalism: rigid adherence to conventional, middle-class values.

Item 3. Authoritarian-submission: submissive, uncritical attitude toward idealized moral authorities of the ingroup.

Item 4. Authoritarian-aggression: tendency to be on the lookout for, and to condemn, reject, and punish people who violate conventional values.

Item 5. Anti-intraception: opposition to the subjective, the imaginative, the tender-minded.

Item 6. Superstition and stereotypy: belief in mystical determinants of the individual's fate; disposition to think in rigid categories.

Item 7. Power and "toughness": preoccupation with the dominance-submission, strong-weak, leader-follower dimension; identification with power figures; overemphasis on the conventionalized attributes of the ego; exaggerated assertion of strength and toughness.

Item 8. Projectivity: disposition to believe that wild and dangerous things go on in the world; the projection outward of unconscious emotional impulses.

Two other subscores yielded by the standard "F" Scale were not included. These are destructiveness and cynicism (generalized hostility, vilification of the human) and sex (exaggerated concern with sexual "goings-on"). These subscores could not be obtained because the modification of the standard scale involved the omission of two items which contributed to these values.

A former study by the Office of Research and Evaluation provided some suggestion for the possibility that the teachers who stay within the New York City system might have personality structures somewhat similar to high scorers on the "F" Scale. In 1953, as part of an investigation into teacher personality and teacher effectiveness, an attempt was made to identify a pattern of Rorschach performance that would reflect personality characteristics considered desirable for teaching as rated by student

teacher supervisors. The desirable patterns, for elementary level teachers, seemed to be associated with an emotionally outgoing, somewhat ambitious, labile and suggestible orientation, a primary interest being in people and in the environment (31). These desirable teachers seem to be, in the popular sense, relatively more extroverted than introverted. The possibility was suggested that the desirable teachers, or those who "fit" better and therefore tend to persist in the field, may be those individuals who are characterized in "F" Scale terminology by the broad psychological mechanism of externalization rather than internalization.

Externalization is seen as a mechanism used by high rather than by low scorers. It refers to the tendency not to face unacceptable impulses and reactions in oneself (such as ambivalence, aggression, or passivity) and to defend against them mainly by the mechanism of projection, whereby much of what cannot be accepted as part of oneself is externalized. Thus, it is not oneself but others that are seen as hostile and threatening. Or, one does not recognize one's own weakness and does not deal with it within oneself but tends instead to see much that is weak in the environment and proceeds to condemn and fight against this external weakness. A frequent accompaniment of this contempt for external weakness is a compensatory drive for power, strength, and success.

Another aspect of externalization is a tendency toward avoidance of introspection and of insight in general. There is a tendency to ignore the social and psychological determinants of human characteristics and events and not to take into account possible inner sources of one's ideas and behavior. There is also an inclination toward mobility and activity and a striving for material benefits as opposed to the favoring of more

passive, internalized pleasures such as affection, companionship, or the arts.

In the light of these aspects of externalization and the suggestion that externalization might be a mechanism that characterizes persisting teachers, we will looking somewhat more closely at the variables of projectivity, power and toughness, anti-intraception, and thoritarian aggression as possible discriminators between persistent and non-persistent groups.

Item 9. Minnesota Teacher Attitude Inventory. The Minnesota Teacher Attitude Inventory was designed to measure those attitudes of a teacher which are related to his ability to establish and maintain rapport with pupils. It consists of 150 opinion statements, to each of which the respondent indicates the extent of his agreement or disagreement on a five-step scale (4).

The concurrent validity of the Minnesota Teacher Attitude Inventory has been well documented in several studies and has also been shown to discriminate teachers reliably at various levels of training and experience. If ability to get along with pupils, to establish and maintain harmonious relationships with them, is a factor in determining a teacher's willingness to stay in the profession, it seems likely that this instrument may predict such persistence.

Item 10. The Social Class Identification Occupational Rating Scale. This scale is a standardized instrument designed to determine the social class with which a person identifies himself. It consists of a list of 42 occupations rated according to the socio-economic status ascribed to each. The response consists of the judgment of the individual whether people in each occupation belong to the same, a higher or a lower

social class than he himself does. The social class identification of the individual is inferred from the extent to which his responses resemble those of persons who declared themselves as belonging to various socio-economic classes (30).

This instrument was given to the student teachers under the hypothesis that one factor which might reduce the holding power of the teaching profession, at least in New York City, is the discrepancy between the teacher's socio-economic level and the level represented by the majority of his pupils. There might thus conceivably be a relationship between a teacher's perceived socio-economic status and his persistence in the profession. It should be remarked that a large number of student teachers (about 10 percent) objected to the instrument because it violated an egalitarian philosophy which they held. They stated to the proctors of the test that they did not believe any occupation had a higher or lower status than their own. Some individuals marked all occupations as having the same prestige value as their own or that of their family.

Item 11. ST-3 Total Self Evaluation. This form, prepared by the research staff of the Office of Research and Evaluation, elicits both subjective and objective information about student teaching experiences. In it each student is asked questions about the pupils he taught, the number of schools in which he taught, and estimates of the amounts of time spent in various activities connected with student teaching. (See Appendix)

Items 12, 13, 14. Self Evaluation Inventory. On this form, each student teacher was asked to evaluate himself in three roles played by all teachers:

Role I. The role of providing learning experiences that will result in pupils' acquisition of fundamental knowledge.

Role II. The role of providing children with learning experiences that will result in their acquiring modes of behavior leading to good citizenship, personal satisfaction, and self-understanding.

Role III. The role of professional colleague to other teachers, supervisors, and administrators.

Under the hypothesis that the degree to which a teacher feels successful in the various roles she must play in the classroom is related to persistence in teaching, it seemed reasonable to obtain the student's own reaction to the only teaching experience he had had thus far -- that is, the student-teaching experience. Rather than ask for a single overall judgment, without spelling out the nature of teaching success, three alternative concepts of success as a teacher were defined, and the teacher asked to evaluate her own success in each respect. (See Appendix)

Item 15. Inventory IV. This inventory consists of 32 multiple-choice statements designed to sample opinions about student teaching experience. Each of the 32 items contains three choices, one of which indicates satisfaction with student teaching. The score on Inventory IV was the total of such "satisfaction" responses. The possible range is therefore 32 points. An estimated reliability coefficient of 84 was obtained for this instrument with a sample of 174 student teachers (2).

The rationale for including a measure of satisfaction with student teaching as a possible predictor of persistence in the teaching profession does not seem to need any elucidation. (See Appendix)

Statistical analysis

The principal hypothesis to be tested in the study was whether or not the teacher in training who would later fall into one or another of the seven groups differed on any of fifteen measures obtained at that time. The appropriate statistical technique for testing this hypothesis seemed to be Mahalanobis' D^2 or generalized distance function, as described by Rao (27).

Multiple-discriminant analysis is a technique for analyzing data that consist of a number of measures on each individual in each of a number of groups. Saupe defined the method as follows (29):

> "The technique is analogous to the analysis of variance (except that more than one measure is involved) in that it can be used for testing hypotheses about group differences. It is analogous to factor analysis (except that more than one group is involved) in that it provides a basis for interpreting the nature of group differences in terms of dimensions. It is analogous to multiple correlation (expect that the criterion is group membership and not a linear variant) in that the results of the analysis can be used to predict the group to which an unclassified individual belongs."

Multiple-discriminant functions are computed as the vectors associated with the latent roots of the determinantal equation

$$|W^{-1}A - \lambda I| = 0$$

when I is an identity matrix and W is the pooled within-groups deviation scores cross-products matrix.

$$A = T - W$$

When T is the total samples deviation score cross-products matrix. The matrix A is the among-groups cross products of deviations of group from grand means weighted by group sizes:

$$a_{ji} = \sum_{K=1}^{g} N_g (\bar{X}_{iK} - \bar{X}_i)(\bar{X}_{jK} - \bar{X}_j)$$

Wilks' lambda criterion is used to test the discriminating-power of the resulting multiple discriminant functions. Wilks' lambda criterion is derived as a function of the roots of $W^{-1}A$ as follows:

$$\Lambda = \prod_{i=1}^{r} \left[\frac{1}{(1 + \lambda_i} \right].$$

The percentage of the total discriminating power of the battery contained in the discriminant function is represented by

$$100 \left(\frac{\lambda_j}{\sum_{i=1}^{r} \lambda_i} \right).$$

A more detailed discussion of the multiple-discriminant analysis technique may be found in Rao (27) and Cooley & Lohnes (5).

The 1620 model II IBM Computer, Teachers College, Columbia University was used for the statistical analysis. The following computer programs were utilized:

T.C. Computer Center Library Program No. 031-S
Multiple Discriminant Function I
P.R. Lohnes, SUNY at Buffalo, 1963

T.C. Computer Center Library Program No. 021-S
Multiple Discriminant Function II
P.R. Lohnes, SUNY at Buffalo, 1963

T.C. Computer Center Library Program No. 040-S
Sub-routine L Diagonal, Power & Exhaustion
Eigenvalues Solution.
P.R. Lohnes, SUNY at Buffalo, 1963

T.C. Computer Center Library Program No. 042-S
Matrix Inversions (R, N, Determinant)
P.R. Lohnes, SUNY at Buffalo, 1963

T.C. Computer Center Library Program No. 034-S
Rectangular Matrix Punch
P.R. Lohnes, SUNY at Buffalo, 1963

Cooley, W. W. and Lohnes, P.R. (27)
Centroids and Dispersions in Discriminant or Factor Space
(RSPACE)
Revised by Barbuto, 1966

Chapter IV

RESULTS

Means and standard deviations were computed for each of the fifteen measures for each of the seven groups and for the total sample. Tables 4 and 5 show the distribution of group means and standard deviations. It became evident at this point that there was little difference in group means and variance. Table 6 summarizes the fifteen F tests from an analysis of variance of group differences in each of the fifteen measures. None of the measures was significant at the .05 level of confidence.

On the premise that a combination of measures, when the entire profile was considered, might prove significant, a discriminant function analysis was conducted to test the significance of the group separations. The analysis described four discriminant functions which accounted for 99.97 per cent of the total variance.

The scaled vectors (Table 7) indicate that the large contributors to group separation along the first discriminant function are a negative weighting of the Total F Scale, a positive weighting of the Minnesota Teaching Attitude scale, and the Submission scale of the F scale. Low scores on the Total F scale and high scores on the Minnesota Teaching Attitude scale and the Submission scale of the F scale resulted in high scores on function I.

The large contributors to the second descriminant function were the Minnesota Teaching Attitude scale and the total F scale. There were no evident patterns in the two remaining discriminant functions.

The significance of the difference between the seven groups on the four computed discriminant functions was tested by the computation of

TABLE 4

Group Means for Seven Categories of Teacher Persistence on 15 Measures

Measure	1 AT	2 TLR	3 RF	4 NT	5 TLNR	6 TLIR	7 TLU	Total
1. F Scale - Total	93.46	89.44	86.50	90.00	85.23	86.42	88.25	88.63
2. F - Conventionalism	3.31	3.07	2.85	3.42	2.74	2.97	3.03	3.06
3. F - Authoritarian-Submission	3.57	3.30	3.16	3.31	3.44	3.35	3.29	3.38
4. F - Authoritarian-Aggression	2.90	2.66	2.88	3.08	2.52	2.72	2.64	2.74
5. F - Anti-Intraception	3.00	2.83	2.97	2.98	2.80	2.84	3.04	2.90
6. F - Superstition & Stereotypy	2.95	2.70	2.75	2.52	2.85	2.63	2.65	2.73
7. F - Power & "Toughness"	2.94	2.89	2.75	3.19	2.55	2.73	2.76	2.81
8. F - Projectivity	2.74	2.64	2.87	2.60	2.53	2.47	2.67	2.59
9. Minnesota Teacher Attitude	157.26	157.44	148.50	149.15	161.84	163.09	164.74	160.24
10. Sims Social Class	19.03	19.03	20.10	20.85	20.02	19.93	20.23	19.70
11. ST-3 Total	19.27	20.23	16.90	17.10	18.41	19.97	19.00	19.40
12. Role I - Facts	4.23	4.06	4.20	3.05	4.33	4.16	4.14	4.13
13. Role II - Citizenship	5.07	4.23	5.20	3.25	4.64	4.92	4.12	4.67
14. Role III Prof.-Colleague	5.40	5.71	6.30	4.60	5.71	5.64	5.23	5.52
15. Satisfaction Inv.	5.14	5.28	5.00	4.05	5.17	5.01	5.29	5.08
N	96	59	11	20	42	170	55	453

TABLE 5

Standard Deviations for Seven Categories of Teacher Persistence on 15 Measures

Measure	1 AT	2 TLR	3 RF	4 NT	5 TLNR	6 TLIR	7 TLU	Total
1. F Scale - Total	26.99	22.65	34.16	22.44	18.10	21.19	17.07	22.53
2. F - Conventionalism	1.25	1.15	1.56	1.21	.87	1.01	1.06	1.11
3. F - Authoritarian-Submission	1.11	1.03	1.69	1.16	1.01	1.13	1.08	1.11
4. F - Authoritarian-Aggression	1.05	.88	1.25	1.16	.88	.99	.72	.97
5. F - Anti-Intraception	1.10	.96	1.33	.61	.89	1.01	.93	1.00
6. F - Superstition & Stereotypy	1.04	1.00	1.16	1.03	1.01	1.01	.88	1.01
7. F - Power & "Toughness"	1.09	.88	1.40	.92	.67	.94	.79	.94
8. F - Projectivity	1.25	1.12	1.30	1.22	1.06	1.04	.90	1.10
9. Minnesota Teacher Attitude	28.59	26.96	33.89	31.62	20.37	23.95	23.41	25.86
10. Sims Social Class	3.88	3.58	4.20	3.71	4.43	4.22	3.59	4.00
11. ST-3 Total	5.74	5.46	8.29	6.98	7.16	5.75	5.51	5.96
12. Role I - Facts	2.81	2.85	3.85	2.39	2.61	2.59	2.64	2.70
13. Role II - Citizenship	2.67	3.24	3.42	3.17	2.96	2.64	3.16	2.88
14. Role III Prof.-Colleague	2.88	2.85	2.58	2.94	2.52	2.74	2.86	2.78
15. Satisfaction Inv.	1.87	2.00	1.63	1.93	1.97	1.96	1.97	1.94

TABLE 6

Analysis of Variance for 7 Categories on 15 Measures

Measure	Sums of Squares		Mean Squares		F ratio $n_1 = 6$ $n_2 = 446$	p*
	Within	Between	Within	Between		
1. F Scale - Total	225848.85	3728.35	506.39	621.39	1.22	-
2. F - Conventionalism	547.06	14.91	1.23	2.49	2.02	-
3. F - Authoritarian-Submission	558.17	5.42	1.25	.90	.72	-
4. F - Authoritarian-Aggression	419.72	7.85	.94	1.31	1.39	-
5. F - Anti-Intraception	449.86	3.45	1.01	.58	.57	-
6. F - Superstition & Stereotypy	456.15	8.20	1.02	1.37	1.33	-
7. F - Power & "Toughness"	398.85	8.59	.89	1.43	1.60	-
8. F - Projectivity	542.91	6.28	1.22	1.05	.85	-
9. Minnesota Teacher Attitude	294539.85	7793.15	660.40	1298.86	1.96	-
10. Sims Social Class	7131.49	128.05	15.99	21.34	1.33	-
11. ST-3 Total	15746.36	315.09	35.31	52.52	1.48	-
12. Role I - Facts	3271.52	26.53	7.34	4.42	.60	-
13. Role II - Citizenship	3674.77	97.81	8.30	16.30	1.97	-
14. Role III Prof.-Colleague	3481.90	35.05	7.81	5.84	.74	-
15. Satisfaction Inv.	1690.14	27.84	3.79	4.64	1.22	-

* Note: None of the F's were significant at the .05 level of confidence.

TABLE 7

Discriminant Analysis: Roots and Vectors of $W^{-1}A$

Measure	Normalized Vectors				Scaled Vectors			
	I	II	III	IV	I	II	III	IV
1. F Scale - Total	-.0057	.0133	-.0005	.0342	-1.0000	.6110	- .0872	.0342
2. F - Conventionalism	.4724	-.5258	-.1790	-.2250	.1534	-.0445	- .0540	-.2250
3. F - Authoritarian-Submission	.5966	-.1437	-.7017	-.2746	.1976	-.0124	- .2163	-.2746
4. F - Authoritarian-Aggression	.0253	.2820	.7890	-.2431	.0063	.0183	.1829	-.2431
5. F - Anti-Intraception	.1511	.5719	.0515	.2409	.0403	.0398	.0127	.2409
6. F - Superstition & Stereotypy	-.1702	.0189	.0525	-.6164	- .0460	.0013	.0132	-.6164
7. F - Power & "Toughness"	.6140	.1621	-.1346	.2956	.1453	.0100	- .0296	.2956
8. F - Projectivity	-.0437	.0575	-.2777	-.2925	- .0140	.0048	- .0832	-.2925
9. Minnesota Teacher Attitude	.0044	.0285	-.0080	.0006	.5953	1.0000	-1.0000	.0006
10. Sims Social Class	-.0186	-.0903	-.0436	.0865	- .0790	-.0998	- .1720	.0865
11. ST-3 Total	-.0062	.0627	.0279	.0719	- .0581	.1530	.2428	.0719
12. Role I - Facts	-.0345	.0335	-.0372	.0293	- .0670	.0169	- .0673	.0293
13. Role II - Citizenship	-.0533	.0067	.2507	-.0725	- .1164	.0038	.5089	-.0725
14. Role III Prof.-Colleague	-.0313	-.0283	-.0591	-.0672	- .0647	-.0152	- .1137	-.0672
15. Satisfaction Inv.	-.0646	.1023	-.2637	-.1089	- .0648	.0268	- .2461	-.1089

Latent Roots	Per Cent of Trace
λ_1 = .0893	40.69
λ_2 = .0554	25.24
λ_3 = .0428	19.52
λ_4 = .0319	14.52

The λ_i = .0000 where i = 5 to 15; trace of $W^{-1}A$ = .2193. The $\Sigma\lambda_i$ = .2194, Λ = .8084 F^{90}_{2436} = 1.0434, p not significant at the .05 level of confidence.

Wilks' lambda criterion. The Λ for the seven groups was .8084, which was not significant at the .05 level. Thus, the probability of producing group differences this large or larger by drawing random samples from the fifteen-dimensional multivariate matrix is due to chance alone.

The generalized multivariate, null hypothesis was that the seven groups had similar scores on each of the fifteen measures. There is insufficient reason to reject the null hypothesis.

Since we had obtained ample evidence that none of the fifteen measures, taken alone or in a multiple combination of any form, would discriminate among the seven groups, there was little value in examining the group differences further. Any attempt to predict group membership in terms of any of the fifteen measures would be merely a "chance" prediction.

Chapter V
DISCUSSION AND CONCLUSION

This study was the latest of a series initiated in 1953 by the Office of Research and Evaluation. The 453 subjects were drawn from a longitudinal sub-sample of 590 females who completed their teacher training during the 1953-54 academic year and had answered four subsequent follow-up questionnaires.

The objective was to relate extensive psychometric information secured in 1954 when the subjects were student teachers to their subsequent persistence as teachers. It was hoped that the results would make it possible to determine the extent to which the test scores were predictive of teacher persistence.

In interpreting the findings it is important to review some of the limitations inherent in the study. The current study was based upon data collected from one class of student teachers graduated from the four New York City municipal colleges. About two-thirds of the original graduating class was lost to the sample during the subsequent ten-year period. Although the remaining sub-sample appeared to be representative of the original sample, there was no proof that these graduates were representative of all student teachers graduated from the municipal colleges in other years.

It is also important to note that the psychometric information available was limited to those measures administered by the researchers in 1953.

The sub-sample of 453 females was divided into seven groups of teacher persistence:

1. always taught
2. taught-left-returned
3. related fields
4. never taught
5. taught-left-not returning
6. taught-left-intend to return
7. taught-left-undecided.

The groups were then subjected to multiple discriminant function analysis in order to separate the seven groups on 15 psychometric measures, taken in 1953, in such a way as to maximize the differences among the groups.

Although four discriminant functions were resolved, and a slight pattern appeared in the first two functions, it was evident from the data that there was no significant difference between the group clusters on any of the fifteen measures taken singularly or in any multiple combination. Thus, it would be impossible to predict membership in any one of the seven groups from scores derived from the 15 measures used in the study.

This does not prove that there is no difference between the groups. It is entirely possible that other measures such as the Strong Vocational Interest Blank, the Edwards Personal Preference Schedule, or projective techniques like the Draw a Teacher in a Classroom might differentiate among the groups. However, it must be conceded at the present time that ten years of study have failed to provide measures for predicting persistence in teaching. The Office of Research and Evaluation has interviewed a sample of 50 career-oriented, persistent teachers and is currently interviewing 100 non-persistent teachers. It is possible that new insights will be gained and, as a result, new instruments developed for predicting teacher persistence.

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A P P E N D I X

The City University of New York
Division of Teacher Education
OFFICE OF RESEARCH AND EVALUATION

City College
Hunter College

Brooklyn College
Queens College

INVENTORY I

DIRECTIONS

Indicate the extent of your agreement or disagreement with each of the numbered statements given below by placing an "X" under the appropriate column. Work rapidly and record your first impression.

	AGREE			DISAGREE		
	Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
1. Obedience and respect for authority are the most important virtues children should learn.	—	—	—	—	—	—
2. No weakness or difficulty can hold us back if we have enough willpower.	—	—	—	—	—	—
3. Science has its place, but there are many important things that can never possibly be understood by the human mind.	—	—	—	—	—	—
4. Human nature being what it is, there will always be war and conflict.	—	—	—	—	—	—
5. Every person should have complete faith in some supernatural power whose decisions he obeys without question.	—	—	—	—	—	—
6. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.	—	—	—	—	—	—
7. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.	—	—	—	—	—	—
8. What the youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.	—	—	—	—	—	—
9. Some people are born with an urge to jump from high places.	—	—	—	—	—	—
10. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially careful against catching an infection or disease from them.	—	—	—	—	—	—
11. An insult to our honor should always be punished.	—	—	—	—	—	—

	AGREE			DISAGREE		
	Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
12. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.	—	—	—	—	—	—
13. It is best to use some prewar authorities in Germany to keep order and prevent chaos.	—	—	—	—	—	—
14. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.	—	—	—	—	—	—
15. There is too much emphasis in college on intellectual and theoretical topics, not enough emphasis on practical matters and on the homely virtues of living.	—	—	—	—	—	—
16. People can be divided into two distinct classes; the weak and the strong.	—	—	—	—	—	—
17. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.	—	—	—	—	—	—
18. Some day it will probably be shown that astrology can explain a lot of things.	—	—	—	—	—	—
19. The true American way of life is disappearing so fast that force may be necessary to preserve it.	—	—	—	—	—	—
20. Nowadays more and more people are prying into matters that should remain personal and private.	—	—	—	—	—	—
21. Wars and social troubles may someday be ended by an earthquake or flood that will destroy the whole world.	—	—	—	—	—	—
22. Most of our social problems would be solved if we could somehow get rid of immoral, crooked, and feebleminded people.	—	—	—	—	—	—
23. One of the main values of progressive education is that it gives the child great freedom in expressing those natural impulses and desires so often frowned upon by conventional middle-class society.	—	—	—	—	—	—

	AGREE			DISAGREE		
	Strongly	Moderately	Slightly	Slightly	Moderately	Strongly
24. If people would talk less and work more, everybody would be better off.	—	—	—	—	—	—
25. Most people don't realize how much of our lives are controlled by plots hatched in secret places.	—	—	—	—	—	—
26. Homosexuals are hardly better than criminals and ought to be severely punished.	—	—	—	—	—	—
27. The businessman and the manufacturer are much more important to society than the artist and the professor.	—	—	—	—	—	—
28. No sane, normal, decent person could ever think of hurting a close friend or relative.	—	—	—	—	—	—
29. Familiarity breeds contempt.	—	—	—	—	—	—
30. Nobody ever learned anything really important except through suffering.	—	—	—	—	—	—

Division of Teacher Education
Office of Research & Evaluation

ST. No. _____

AS YOU SEE YOURSELF

During your teaching experience this year, you have been introduced to a variety of roles played by teachers. For the purposes of this study, we would like you to judge how well you have played some of these roles during this past year. To do this, imagine that you are a member of a typical group of 20 teachers. Then estimate where you would stand in this group in each of the three roles described below. For example, if you feel that you have been more successful in playing a role than 16 of the 20 teachers in the typical group, you would write the number 16 in the appropriate space. If, on the other hand, you feel that you had been more successful in playing a role than only 5 out of 20 teachers, you would enter the number 5 in the appropriate space.

Read each of the three role descriptions carefully and then assign yourself a number corresponding to the position you estimate you would have in the typical group of 20 teachers.

Role I. The teacher in this role is responsible for providing learning experiences which will result in pupil's acquisition of fundamental knowledge. The task of the teacher when playing this role is to insure that children will acquire enough of the basic academic tools to enable them to take their appropriate place in society. This role involves such activities as preparing learning materials and explaining work to the children.

I believe that I have been more successful than _____of the typical group of 20 teachers in playing Role I.

Role II. The teacher in this role is responsible for providing children with learning experiences which will result in their acquiring modes of behavior leading to good citizenship, personal satisfaction, and self-understanding. This role includes the tasks of developing self-reliance in the pupils, getting them to work together cooperatively, and teaching them to exhibit responsible behavior toward others.

I believe that I have been more successful than _____of the typical group of 20 teachers in playing Role II.

Role III. In this role the teacher is a professional colleague of other teachers, supervisors, and administrators. The teacher who plays this role well works smoothly and cooperatively with other teachers, supervisors, and administrators.

I believe that I have been more successful than_____of the typical group of 20 teachers in playing Role III.

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INVENTORY IV

DIRECTIONS

This inventory consists of 32 multiple choice statements designed to sample opinions about student teaching experiences. There is considerable variation as to the kinds of experiences encountered by student teachers. What is wanted is your feeling about your own individual experiences. There are, of course, no 'right' or 'wrong' answers.

If you have worked with more than one cooperating teacher, respond in terms of the situation in which you spent the most time. If you have spent about as much time in each situation, respond in terms of your last experience.

Read each statement and decide which one of the three choices best indicates how YOU feel. Then mark your choice on the special answer sheet by blackening between the parallel lines corresponding to the number of your choice.

Your opinions about your student teaching experiences will, of course, be held strictly confidential. The data will be used for research purposes only. We are interested solely in group data and there will be no attempt to identify your cooperating teacher or college supervisor.

PLEASE RESPOND TO EVERY ITEM

1. I feel that the contributions I made to the class activity as a whole:
   (1) were not usually very effective.
   (2) were constructive and helpful.
   (3) were too infrequent to be effective.

2. In general, I thought the behavior of the pupils I taught was:
   (1) too subdued.
   (2) too rowdy.
   (3) satisfactory.

3. The comments made by my cooperating teacher regarding my mistakes were:
   (1) just critical enough to be helpful.
   (2) overly critical.
   (3) not critical enough.

4. I was made responsible for conducting the class:
   (1) sooner than I would have liked.
   (2) later than I would have liked.
   (3) at just about the right time.

5. My student teaching experiences left me with a feeling that teaching is:

   (1) somewhat unorganized.
   (2) very challenging and interesting.
   (3) a little too routine.

6. When discussing my student teaching performance with me, my college supervisor was:

   (1) too critical.
   (2) not critical enough.
   (3) just critical enough.

7. The intelligence level of most of the pupils I taught:

   (1) was lower than I would have liked.
   (2) was just about what I would like in my own class.
   (3) was higher than I would have liked.

8. A comparison of what I strived for and what I attained in teaching my pupils made me:

   (1) feel that I may have expected too much of myself.
   (2) feel a sense of accomplishment.
   (3) feel a bit discouraged.

9. In preparing me to become a member of the teaching profession, student teaching has left me with a feeling of being:

   (1) unqualified to enter the schools as a teacher.
   (2) barely prepared to teach in the schools.
   (3) adequately prepared to teach in the schools.

10. My personal relationships with staff members at the school:

   (1) were very pleasant and cordial.
   (2) were distant and impersonal.
   (3) were somewhat unsatisfying.

11. My cooperating teacher's interest in my professional improvement and growth was:

   (1) somewhat superficial.
   (2) sincere and helpful.
   (3) intensive to the point of being annoying.

12. The regulations to which I, as a student teacher, had to conform seemed:

   (1) unnecessary in many respects.
   (2) rather vague but not unreasonable.
   (3) reasonable and agreeable to me.

13. The assignments given to me by my cooperating teacher:

   (1) were about as varied as they should be.
   (2) were too varied to learn any one aspect of teaching.
   (3) were not varied enough to broaden my experience.

14. In discussions with my college supervisor, my viewpoint:

   (1) was accepted too often without adequate understanding.
   (2) was accepted and understood practically all of the time.
   (3) was seldom accepted.

15. My own plans for using methods and materials:

   (1) were needed a little too often.
   (2) were employed often enough.
   (3) were not employed often enough.

16. I was given complete charge of the class:

   (1) not as often as I would have liked.
   (2) about the right number of times.
   (3) more often than I would have liked.

17. The pupils I had in my class:
    (1) seemed indifferent to school activities.
    (2) mildly resisted my attempts to teach them.
    (3) were easily motivated.

18. The amount of clerical work given to me by my cooperating teacher was:
    (1) too little for me to learn this aspect of the teaching job.
    (2) appropriate and helpful.
    (3) a little more than I considered necessary.

19. As I evaluate my student teaching experience in light of my other college work, I am convinced that it:
    (1) was one of my least valuable courses.
    (2) was the most valuable course I have taken.
    (3) was about as valuable as my other college courses.

20. My college supervisor's suggestions were:
    (1) of little help to me.
    (2) too demanding of my time.
    (3) reasonable and helpful.

21. Student teaching gave me a feeling of:
    (1) personal inadequacy in some respects.
    (2) achievement and personal satisfaction.
    (3) discouragement with the gap between educational theory and practice.

22. In general, the atmosphere of the classroom to which I was assigned was:
    (1) too easy going for maximum learning by children.
    (2) about as democratic as it should be.
    (3) overly dominated by the teacher.

23. If I had the opportunity to do my student teaching over again, I would want to:
    (1) have a more free choice of school and cooperating teacher.
    (2) teach more in accord with the theory I learned.
    (3) do very much what I have done.

24. I found that my personal relationships with school personnel during student teaching prompted me to:
    (1) just coast along until the end of the semester.
    (2) consider postponement of my teaching career.
    (3) put forth a great deal of effort.

25. Ideally I would like to teach pupils whose socio-economic background is:
    (1) lower than the socio-economic background of those whom I taught.
    (2) about the same as the socio-economic background of those whom I taught.
    (3) higher than the socio-economic background of those whom I taught.

26. The amount of satisfaction I had from my student teaching experience made me wonder:
    (1) whether student teaching couldn't be organized more satisfactorily.
    (2) whether some other activity shouldn't be substituted for it.
    (3) why some people dislike this experience.

27. When delegating tasks to me, my cooperating teacher:
    (1) proportioned my work according to the amount of time I had available.
    (2) was not too considerate of the amount of work I had to do outside of student teaching.
    (3) was often unable to find enough things to keep me busy.

28. The methods of teaching adhered to by my cooperating teacher:
    (1) were too subject-centered to meet the needs of enough children.
    (2) were too child-centered to effectively teach the necessary subject matter.
    (3) were appropriate for obtaining the desired pupil growth.

29. When planning the classroom activities, my cooperating teacher:
    (1) sometimes assigned the planning to me but often ignored my efforts.
    (2) usually had me participate in the planning with her.
    (3) seldom gave me a chance to participate in the planning.

30. The goals toward which I was striving in my student teaching:
    (1) were generally attained to my satisfaction.
    (2) were seldom attained to my satisfaction.
    (3) were probably not appropriate to the pupils I taught.

31. The kinds of activities in which pupils in my student teaching class participated:
    (1) were too routine to stimulate the interests of the children.
    (2) were about like those I would like in my own classroom.
    (3) were lacking in purpose and meaning for most of the children.

32. The skills I learned during student teaching:
    (1) should be of enormous value when teaching 'on my own.'
    (2) will probably be unimportant to my future teaching performance.
    (3) were actually too few in number to affect my future teaching.